

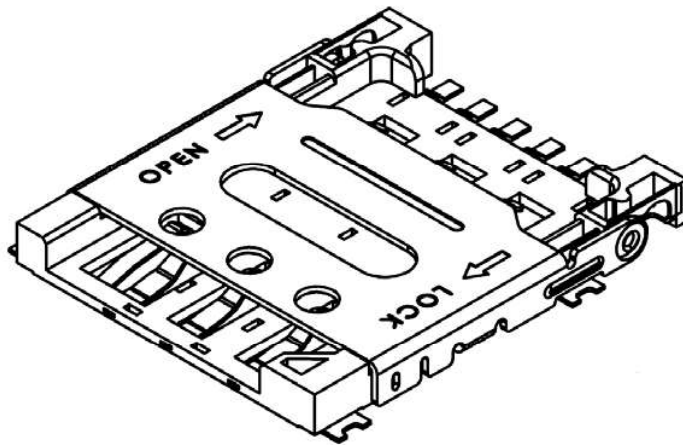


**THE DATASHEET OF
TMUX4051PWRQ1**



PRODUCT SPECIFICATION

Part Number	SIM8060	Rev	B	Date	08/04/19		
Product Description	Nano SIM Card Connector, Hinged Type, SMT, 6Pin, 1.43mm Profile			Page	1		
Doc Number	SIM8060	Prepared	CC	Checked	VJ	Approved	PH



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1.0 SCOPE.

This specification covers performance, tests and quality requirements for the Nano SIM Card Connector SIM8060 (Hinged Type, SMT, 6 Pin,1.43mm Profile).

2.0 PRODUCT NAME AND PART NUMBER.

Nano SIM Card Connector, Hinged Type, SMT, 6 Pin,1.43mm Profile: SIM8060.

3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

4.0 RATINGS.

Current Rating 0.5A AC/DC Max.
 Voltage Rating 125V AC/DC
 Operating Temperature Range -20°C to +85°C
 Storage Temperature -40°C to +70°C
 Storage Humidity..... Relative Humidity: ≤80%

5.0 TEST AND MEASUREMENT CONDITIONS.

Product is designed to meet electrical, mechanical and environmental performance requirements specified in Paragraph 6.0. All tests are performed at ambient environmental conditions unless otherwise specified.

6.0 PERFORMANCE.

Item	Test Condition	Requirement
Examination of Product	Visual, dimensional and functional inspection as per quality plan.	Product shall meet requirements of product drawing and specification.

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6.1 Electrical Performance.

Item	Test Condition	Requirement
Contact Resistance	Measure and record contact resistance of mated connector using test current of 10mA max and 20 mV open circuit voltage in accordance with EIA-364-23.	80 mΩ max initial 140 mΩ max after test.
Insulation Resistance	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. In accordance with EIA-364-21.	100 MΩ minimum @100V DC for 1 minute
Dielectric Strength	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. In accordance with EIA-364-20.	Connector must withstand test potential of 500 V AC for 1 minute. Current leakage must be 1.0 mA Max.

6.2 Mechanical Performance.

Item	Test Condition	Requirement
Durability	Mate & unmate Nano SIM card at vertical direction to the position equal to inserting a 0.67mm thick Nano SIM card for 5000 cycles. In accordance with EIA-364-09.	Contact Resistance: 100 mΩ max.
Contact Normal Force	Measure contact normal force at distance equal to inserting a 0.67mm thick Nano SIM card.	0.4N Min.
Cover Lock and Unlock Force	Lock and unlock cover at a rate of 25.4mm/min.	Lock Force: 1.5N Min. Unlock Force: 10N Max.
Mechanical shock	Subject the part to a 490 m/s ² half sine wave acceleration for 11 ms. Three shocks to be applied in each of the X, Y and Z planes and in both directions. A total of 18 shocks 10mA Max. Applied. In accordance with EIA-364-27.	Appearance: No Damage. Discontinuity: 1.0 μ second Max. Contact Resistance: 100 mΩ max
Vibration	Insert SIM card into connector and expose to 10 to 55 to 10 Hz frequency span over 1 minute at a 1.52mm amplitude for a total of 2Hours. Test to be conducted on 3 mutually perpendicular planes. 10mA Max. Applied. In accordance with EIA-364-28.	Appearance: No Damage. Discontinuity: 1.0 μ second Max. Contact Resistance: 100 mΩ max

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6.3 Environmental Performance and Others.

Item	Test Condition	Requirement
Temperature Rise	Mate card and measure the temperature rise of contact, when rated current is passed. In accordance with EIA-364-70 Method 1.	30°C Max
Solderability	Dip solders tails into molten solder, held at a temperature of 250±5°C up to 0.5mm from the tip of the tails for 3±0.5 seconds.	Contact solder pad has a min. 95% solder coverage
Resistance to Hand Soldering Heat	Soldering iron method Soldering Time: 5 sec. Solder Temperature: 370-400°C 0.5mm from terminal tip	No damage
Resistance to Reflow Soldering Heat.	Mount connector, place in reflow oven and expose to the temperature profile shown in fig 1.0	No evidence of physical damage or abnormalities adversely affecting performance.
Temperature Life	Subject mated connectors to temperature life at +85 °C for 96 hours	100 mΩ max.

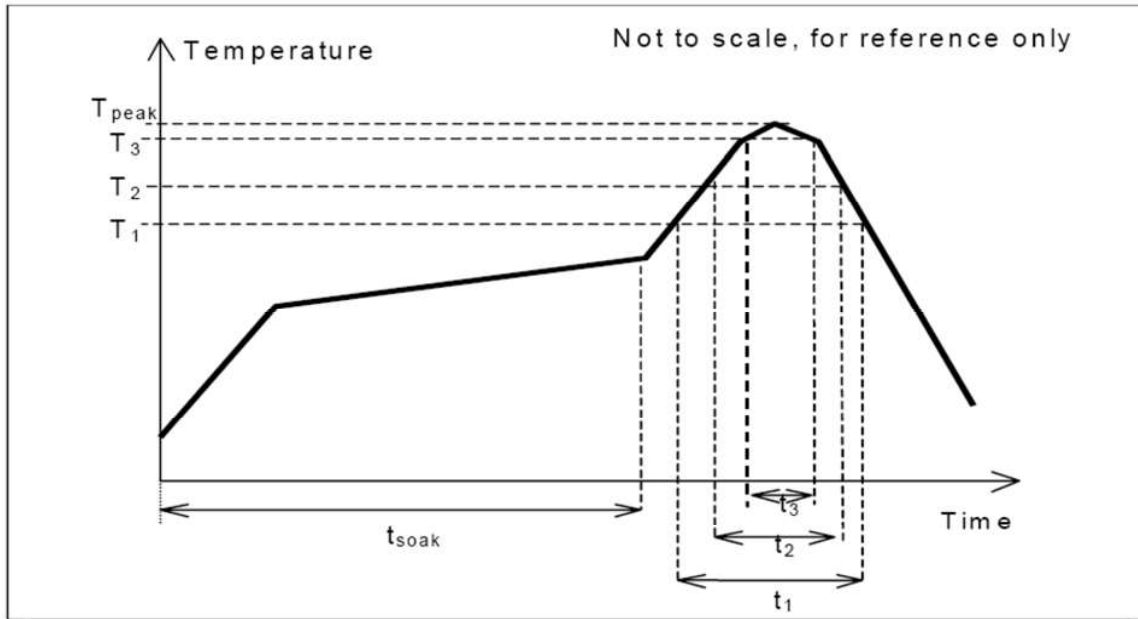
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6.4 REFLOW SOLDERING PROFILE

Pb-free reflow profile requirements

Parameter	Reference	Specification
Average temperature gradient in preheating		2.5°C/s
Soak time	t _{soak}	2-3 minutes
Time above 217°C	t ₁	60 s
Time above 230°C	t ₂	50 s
Time above 250°C	t ₃	5 s
Peak temperature in reflow	T _{peak}	255°C (-0/+5°C)
Temperature gradient in cooling		Max -5°C/s



This profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile is higher and largely dependent on the reflow equipment.

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7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test Item	Group						
	A	B	C	D	E	F	G
Examination of Product	1,7	1,3	1,3	1,3		1,6	1,5
Contact Resistance	2,6					2,5	2,4
Insulation Resistance	3						
Dielectric Withstanding Voltage	4						
Durability	5						
Temperature Rise		2					
Solderability			2				
Resistance to Soldering Heat				2			
Contact Normal Force					1		
Cover Lock and Unlock Force					2		
Mechanical shock						3	
Vibration						4	
Temperature life							3

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Revision details

Revision	Information	Page	Release Date
A	Specification Released	-	06/09/2018
B	Add test items: Mechanical shock, Vibration and Temperature life; Change operation temperature from -20°C to +60°C to -20°C to +85°C	2,3,4	08/04/2019

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